

REMARKS

Claims 1-5 are pending. Claims 1 and 4 are independent.

Claim Rejections – 35 U.S.C. § 103

Claims 1-5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marro (U.S. Patent No. 5,901,044 in view of Ward et al. (U.S. Patent No. 5,691,885). Applicants respectfully traverse this rejection.

At the outset, the Examiner's rejection is unclear, since it is based on a combination of two references (Marro and Ward et al.), yet a third reference (Boucheron) is discussed in the body of the rejection. In addition, the rejection is made with respect to all of claims 1-5, yet the Examiner includes a later rejection of claim 2 with a further reference to Cooper et al. It is not clear exactly which references are being applied against exactly which claims, making it impossible for Applicants to understand the Examiner's position, and therefore a *prima facie* case of obviousness has not been made. Accordingly, for this reason alone, reconsideration and withdrawal of the pending rejections are respectfully requested.

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness because one of ordinary skill in the art would not be motivated to combine Marro and Ward et al.

Marro discloses a mini-module with upwardly projected leads. The module includes a substrate 12, molded case 14 and leads 16. The leads 16

are positioned adjacent the substrate and bent upwardly so that the leads extend through openings 14g in the case 14. Further, Marro is designed with the objects of having a module that is easy to assemble, adequately protected from severe ambient conditions and has upwardly projected leads.

Ward et al. disclose a three-dimensional interconnect having modules with vertical top and bottom connections. As shown in Fig. 11, the connectors 950 and 954 may be positioned on the upper and lower surfaces of a platform. The connectors are arranged so that female connectors are positioned on the upper surface of the platform and male connectors are positioned on the lower surface of the platform. Further, the connectors are not integral with the modules but rather a type of connector called RS-232 which is added to the platform. See col. 13, line 18.

Although Fig 11 of Ward et al. arguably discloses leads on three sides of a module, one of ordinary skill in the art would not be motivated by Ward et al. to incorporate a similar lead structure into Marro for the following reasons.

First, it is the object of Marro to form leads only in the upwards direction and not to form any type of receiving or female connector. Ward et al. provide both male and female connectors and desires versatility in the positioning of the connectors due to the number of connections needed. Since Marro is only interested in providing leads and not receiving connections, the need for versatility of positioning does not exist for Marro and the leads along only two sides are sufficient.

Second, the internal structure of Marro is designed to support leads only on two opposing sides of the module. If one were to use Ward et al. as a teaching that the leads should be positioned on additional sides of the substrate, the Marro module would not work because there is no further teaching of how the module internal structure or case should be modified to support the additional leads.

Further, an objective of Marro is to provide a module which is easy to assemble and adequately protected from severe ambient conditions. The modification of placing leads on an additional portion on the module based on Ward et al. would require additional assembly time and consideration. Also, it is not known how the additional leads would affect the structural integrity of the module and its interaction with ambient conditions.

Accordingly, claims 1 and 4 are allowable over the prior art.

Regarding claims 2, 3 and 5, the Examiner has included claims 2, 3 and 5 in the rejection based on Marro in view of Ward et al. However, the Examiner admits on page 3, lines 4-end that Marro and Ward et al. do not teach all the features of claims 2, 3 and 5. Therefore, Applicants respectfully request removal of this rejection.

It is possible, although nowhere stated, that the Examiner intended to reject claims 3 and 5 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Marro, Ward et al. and Boucheron. Applicants would respectfully traverse such a rejection, if made.

Although Boucheron discloses connecting two halves 51 and 52 of a circuit board using connecting pins 57, 58 and 61, Boucheron do not disclose, "connecting pins and inserting holes, through which the connecting pins are inserted, are formed in the power board and the signal board" as recited by claim 3.

Additionally, claims 3 and 5 are allowable for at least the same reasons discussed above with respect to their corresponding independent claims.

Accordingly, claims 3 and 5 are allowable over the prior art, and Applicant respectfully requests removal of this rejection.

Claim 2 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Marro and Ward et al. as applied to claim 1 above and further in view of Cooper et al. (U.S. Pat. No. 5,375,040). Applicants respectfully traverse this rejection.

Cooper et al. disclose a modular electronic circuit housing and wiring board. The housing includes a mounting ear 14 having bores 45 and 46 and a heat sink 70. As shown in Figure 8 of Cooper et al., the heat sink 70 cannot be aligned such that it is connected to the housing via bores 45 and 46. Therefore, Cooper et al. do not disclose, "at least two corner portions ... through which the case and a heat sink are coupled with each other," as recited in part by claim 2.

Additionally, claim 2 is allowable for at least the same reasons discussed above with respect to corresponding independent claim 1.

Accordingly, Applicants respectfully submit that claim 2 is allowable over the prior art and request withdrawal of this rejection.

CONCLUSION

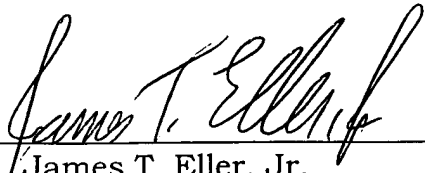
In view of the above remarks, reconsideration of the rejection and allowance of claims 1-5 are respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to contact Jayne Saydah (Reg. No. 48,796) at (703) 205-8000, in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 
James T. Eller, Jr.
Reg. No. 39,538

JTE/JES:sld

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000